



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/905,391	07/13/2001	Arthur Berggreen	64645-1052	3767
27045	7590	04/06/2005	EXAMINER	
ERICSSON INC. 6300 LEGACY DRIVE M/S EVR C11 PLANO, TX 75024			CHOU, ALBERT T	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/905,391	Applicant(s) BERGGREEN, ARTHUR	
	Examiner Albert T. Chou	Art Unit 2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 57 is/are allowed.
- 6) ☒ Claim(s) 1, 12, 13, 19-21, 32, 33, 39, 50 and 51 is/are rejected.
- 7) ☒ Claim(s) 2-11, 14-18, 22-31, 34-38, 40-49 and 52-56 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 12, 13, 19, 20, 21, 32, 33, 39, 50 and 51 are rejected under 35 U.S.C. 102(e) as being anticipated by Meggers et al. (US Patent Number: 6,728,270), hereinafter referred to as Meggers.

Regarding claim 1, Meggers teaches an apparatus (Col. 13, line 42; an apparatus), for scheduling and admission controlling of real-time and non-real-time data packet traffic, comprising,

- A FIFO queue (Figure 4; col. 11, line 50; a first queue);
- An EDF queue (Figure 4; col. 11, line 48; a second queue);
- A Packet Scheduler that includes an Admission Controller AC (Figure 4; col. 11, lines 46-47; a scheduler communicably coupled to the first queue and the second queue), that determines whether the packet admitted for real-time processing (Figure 5, step 220; the scheduler having at least a first operating mode) or best effort strategy (Figure 5, step 250; a second operating mode);

- The FIFO queue is used to receive the admitted data packets according to a best effort strategy like first-in-first-out (Figure 5; steps 250-260; col. 11, lines 50-51; receiving the one or more messages, storing message in the first queue based on a first-in-first-out order) and the data are ready for further processing by an Output Interface OI (Figure 4; col. 12, lines 48-50; scheduling each queued message from the first queue based on the first-in-first-out order); and
- The EDF queue is used for storing data packet admitted for real-time processing (Figure 5, steps 220-240; col. 11, lines 48-49; receiving the one or more messages, store each message in the second queue based on one or more message attributes), and a time stamp of the EDF queue is set to the delivery deadline (Figure 5, step 240; col. 12, lines 46-48; schedule each queued message from the second queue based on one or more operating criteria).

Regarding claims 12, 32 and 50, Meggers teaches all data packets received at the packet scheduler and admitted for real-time processing are forwarded to the EDF queue (Figure 5, step 220; col. 12, lines 31-32). An individual delivery deadline is calculated for each payload data packet (Figure 5, steps 220-240; col. 12, lines 24-25; the second queue is a multi-dimensional queue).

Regarding claims 13, 33 and 51, Meggers teaches for each data packet stored in EDF queue, an individual delivery deadline is calculated for each payload data packet (Figure 5, steps 220-240; col. 12, lines 24-25). For the read-out, the EDF queue always

Art Unit: 2662

provides the data packet with the closet delivery deadline as the highest priority (Col. 11, lines 65-66; one or more message attributes include a message priority).

Regarding claim 19, Meggers teaches an Admission Controller AC (Figure 4; col. 11, lines 46-47; a processor), included in Packet Scheduler, admits or rejects a sub-stream of data packets for real-time processing – an EDF queue for real-time processing and a FIFO queue for the best effort strategy (Figures 4-5; col. 11, lines 46-51; communicably coupled to the scheduler for processing the dispatched messages).

Regarding claim 20, Meggers teaches an Admission Controller AC (Figure 4; col. 11, lines 46-47; a processor), included in Packet Scheduler, admits or rejects a sub-stream of data packets for real-time processing – an EDF queue (memory) for real-time processing and a FIFO queue (memory) for the best effort strategy (Figures 4-5; col. 11, lines 46-51; a memory communicably coupled to the scheduler for storing the one or more operating criteria).

Regarding claims 21 and 39, Meggers teaches a method (Figure 4; col. 11, line 46; a method) and a computer program (Col. 14, line 34; a computer program), for scheduling and admission controlling of real-time and non-real-time data packet traffic, comprising,

- Receiving the message from Admission Controller AC (Figures 4-5; col. 11, lines 46-51; receiving one or more messages);
- Selecting a FIFO queue for input and output for data packets to be processed according to the best effort strategy (Figure 4; col. 11, lines 49-51; selecting a first queue for input and output during a first operating mode);

- Selecting an EDF queue for input and output for data packets required for real-time processing (Figure 4; col. 11, lines 48-49; selecting a second queue for input and output during a second operating mode);
- Storing the rejected data packets (Figure 5; steps 210-250; col. 12, lines 33-35; whenever the first queue is selected for input), that are not required for the real-time processing, according to a best effort strategy in the FIFO queue based on first-in-first-out order (Figure 5; step 260; col. 12, lines 33-35; storing each message in the first queue based on a first-in-first-out order);
Storing the admitted data packets (Figure 5; steps 210-220; col. 12, lines 30-32; whenever the second queue is selected for input), that are required for the real-time processing, in the EDF queue based on the calculated deadline for each packet (Figure 5; steps 230-240; col. 12, lines 25-26, 46-48; storing each message in the second queue based on one or more message attributes);
- The Packet Scheduler includes an Output Interface OI, which prioritizes data packets contained in the FIFO and EDF queues for the further processing (Col. 12, lines 8-10; scheduling each queued message whenever the queue is selected for output). This comprises the choice of a queue, the read-out of a data packet from this queue and the provision of the data packet for the further processing (Col. 12, lines 8-12). For the read-out, for data packets in the FIFO queue will be read out based on the first-in-first-out order (Col. 11, lines 49-51; scheduling each queued message from the first queue based on

the first-in-first-out order) or for data packets in the EDF queue based on closest deliver deadline (Col. 11, lines 65-66; scheduling each queued message from the second queue based one or more operating criteria).

Allowable Subject Matter

3. Claims 2-11, 14-18, 22-31, 34-38, 40-49 and 52-56 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claim 57 is allowed.

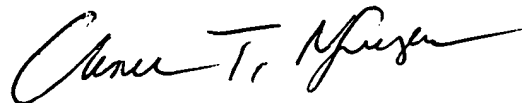
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert T. Chou whose telephone number is 571-272-6045. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2662

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AC
Albert T. Chou
March 29, 2005



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600